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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,704	05/17/2007	Leonardo Jose S Aquino	F7785(V)	4392

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EXAMINER

KRAUSE, ANDREW E

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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11/27/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentgroupus@unilever.com

Office Action Summary	Application No. 10/576,704	Applicant(s) AQUINO ET AL.	
	Examiner ANDREW KRAUSE	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9,10 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7,9,10,12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-7, 9-10, 12-14 are pending. Claims 1, 5, 10, 13 and 14 are currently amended.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. **Claims 1-7, 9-10, 12-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over Farrer (WO 03/053149) in view of Han (US 6,416,797).

4. **Regarding claims 1, 2 and 10, 12**, Farrer discloses producing an edible emulsion by mixing oil, water (p. 3, lines 7-14, p. 17, lines 5-10), a thickener (p. 12, lines 30-33), citrus fibers as a cold hydrating viscosity enhancer in an amount of 3-30% by weight of a powder or tablet, which is later added to a variable amount of oil and water (p. 16, lines 4-12), and a caseinate (p. 17, lines 11-15) as a protein based emulsifier. The recovered by adding oil and water to the caseinate containing tablet and mixing (p. 17, lines 5-10). It is further disclosed to add the emulsifiers to a dairy base such as cream (p. 18, lines 11-18).

5. Regarding the quantity of citrus fiber added, it is disclosed that the amount of oil and water added to the powder is varied based to provide a spreadable final emulsion; therefore an amount of citrus fiber present in the final product is obviously adjustable

based on the desired thickness of the final product, as the citrus fiber is being used to control the viscosity (p. 17, lines 5-10). An example using a different embodiment of the powder is disclosed in Example 1, wherein 45 g of water and 50 g of oil are added to 10 g of the powdered composition. In such a case, the emulsion would contain 0.28 % citrus fiber if it was present in the tablet in the amount of 3% by weight.

6. The product recovered is a spreadable final emulsion that is coarse since it has not been homogenized. Farrer fails to disclose the size of the oil droplets present in the emulsion. However, Han discloses subjecting emulsified spreadable dairy products to a two stage homogenizing process (column 10, lines 23-57), by shearing at 50 C (column 10, lines 15-22), and pressures of preferably 300 psi (20.5 bar) to 10,000 psi (689 bar) wherein the average particle size of fat droplets is reduced to 0.2- 3 microns, thereby creating a smooth emulsion. It would have been obvious to one having ordinary skill in the art at the time of the invention to subject the emulsion of Farrer to the homogenization process disclosed by Han, because homogenization stabilizes the emulsion and allows it to remain in an emulsified state (Han, column 10, 25-30). Additionally, Farrer recognizes the benefit of controlling the oil droplet size, as products with smaller average oil droplet sizes are stable upon storage and show reduced sweating (p. 14, lines 18-21).

7. Although the percentage of particles having a specific particle size is not given, it would be obvious to one having ordinary skill in the art that at least 80% of all fat droplets will have a size less than 5 microns if the average size is reduced to 0.2-3 microns by homogenization (Han, column 10, lines 58-65)

8. **Regarding claim 3**, using the ratio of powdered composition to oil and water disclosed in Example 1, about 47.5% by weight of oil is present in the final emulsion.

9. **Regarding claims 4 and 5**, it is disclosed to use citrus fibers but the specific citrus fiber used is not disclosed. However, one having ordinary skill in the food science art would find it obvious to use lemon, lime, orange or grapefruit fiber given the disclosure of citrus fibers by Farrer.

10. **Regarding claims 6 and 7**, the powdered composition disclosed according to claim 1 comprises from 6-60% of emulsifiers as a mixture of (3-30%)lecithin and (3-30%)caseinate. Using the ratio of powder to oil and water disclosed in example 1, the emulsion formed will have 0.57-5.7% of emulsifiers, and 0.285-2.85% viscosity building emulsifier (caseinate).

11. **Regarding claim 9**, Farrer discloses using gums as a thickener ((p. 12, lines 30-33).

12. **Regarding claim 13**, the food product produced is a spread (p. 1, background of the invention).

13. Regarding claim 14, as disclosed above, Farrer and Han disclose the food product according to claim 13, wherein the food product is produced by mixing oil, water, emulsifiers, thickeners, citrus fiber and a dairy base in the amounts required by the claims, and then homogenizing the emulsion. Farrer is silent regarding the viscosity of the food product produced, but discloses that the product has a spreadable texture. Given that the product of Farrer and Han is produced using the ingredients and methods claimed to yield a product with a spreadable texture as claimed, the product will intrinsically have a viscosity between 500-10,000 centipoise. Further, a tablet according to the invention of Farrer (p. 16, lines 4-14) contains no starch when citrus fiber is used as the viscosifying agent.

Response to Arguments

14. Applicant's arguments, see remarks, filed 7/8/09, with respect to the rejection of claim 10 under 35 U.S.C. 112, 2nd paragraph have been fully considered and are persuasive. The ground of rejection has been withdrawn.

15. Applicant's arguments, see remarks, filed 7/8/09, with respect to the rejections under 35 U.S.C. 102/103 over Bialek (US 7,520,737) have been fully considered and are persuasive. The grounds of rejection have been withdrawn.

16. Applicant's arguments filed 7/8/09 regarding Farrer and Han have been fully considered but they are not persuasive.

17. Applicant argues that Farrer teaches away from the claimed invention as it provides a dry composition that may then be reconstituted to form a spreadable emulsion. The fact that Farrer does not disclose a homogenization step to form a smooth emulsion, does not teach away from doing so, and this deficiency is remedied by the teachings of Han, which relate to homogenizing dairy based emulsions (i.e. compositions comprising an oil or fat and water) to maintain the stability of emulsions. The concept of homogenizing the emulsion and thus reducing oil drop particle size is further supported by Farrer, which recognizes the benefit of controlling the oil droplet size, as products with smaller average oil droplet sizes are stable upon storage and show reduced sweating (above and p. 14, lines 18-21).

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date

of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW KRAUSE whose telephone number is (571)270-7094. The examiner can normally be reached on 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571)272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ANDREW KRAUSE/
Examiner, Art Unit 1794

/Keith D. Hendricks/
Supervisory Patent Examiner, Art Unit 1794